

# (12) UK Patent Application (19) GB (11) 2 214 961 (13) A

(43) Date of A publication 13.09.1989

(21) Application No 8803989.6

(22) Date of filing 20.02.1988

(71) Applicant  
Duraflex Limited

(Incorporated in the United Kingdom)

Duraflex House, Tewkesbury Road, Cheltenham,  
GL51 9PP, United Kingdom

(72) Inventor  
Nigel John Wilson

(74) Agent and/or Address for Service  
A J Brodigan  
RTZ Limited, York House, Bond Street, Bristol,  
BS1 3PE, United Kingdom

(51) INT CL<sup>4</sup>  
E06B 1/36, E04B 7/16

(52) UK CL (Edition J)  
E1J JGA  
E1D DDJ2 DF172 D2055 D401 D402  
E2F FCP  
U1S S1012

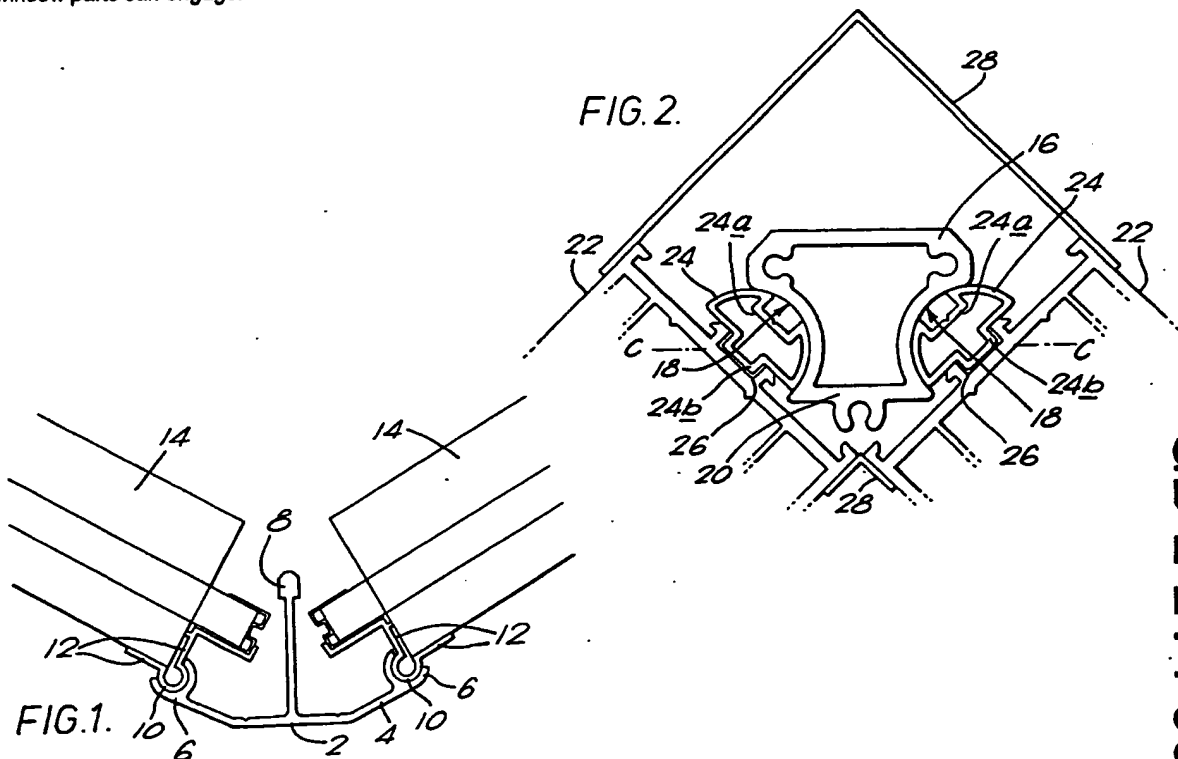
(56) Documents cited  
GB 2151289 A GB 2090692 A GB 2045856 A  
GB 1574716 A EP 0223338 A EP 0143055 A  
US 3869837 A

(58) Field of search  
UK CL (Edition J) E1D DDJ2 DDW2 DF172, E1J  
JGA, E2F FCP  
INT CL<sup>4</sup> E04B, E06B

## (54) Roof; bay window

(57) A device for connecting relatively inclined planar members, such as light-admitting panels 14 of a conservatory roof has a channel member 2 the longitudinal edge portions are formed with channels 6 of arcuate cross section form which are each adapted to pivotally receive a complimentary formation 10 of a swivel member 12 for carrying a light admitting panel. Channel 2 acts as a rain water gulley.

In Figure 2 a bar 6 joining parts of a bay window has arcuate channels in which swivel members 24 attached to the window parts can engage.

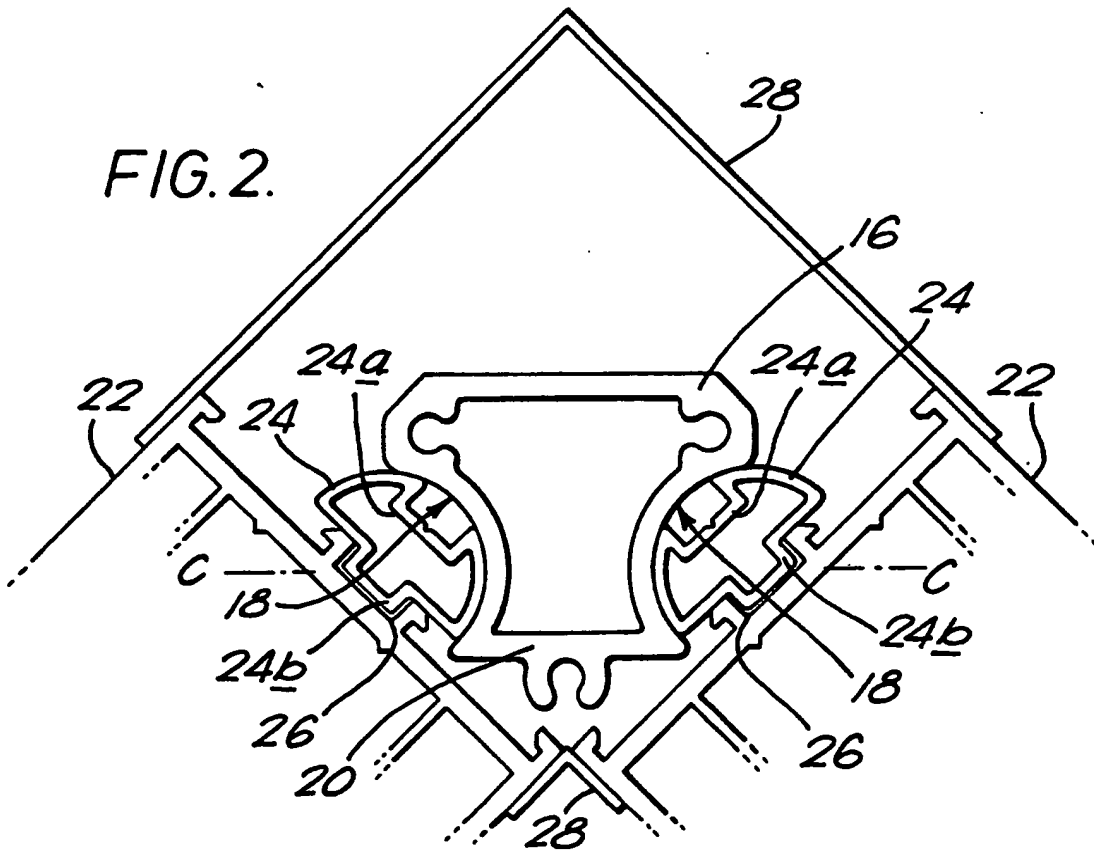
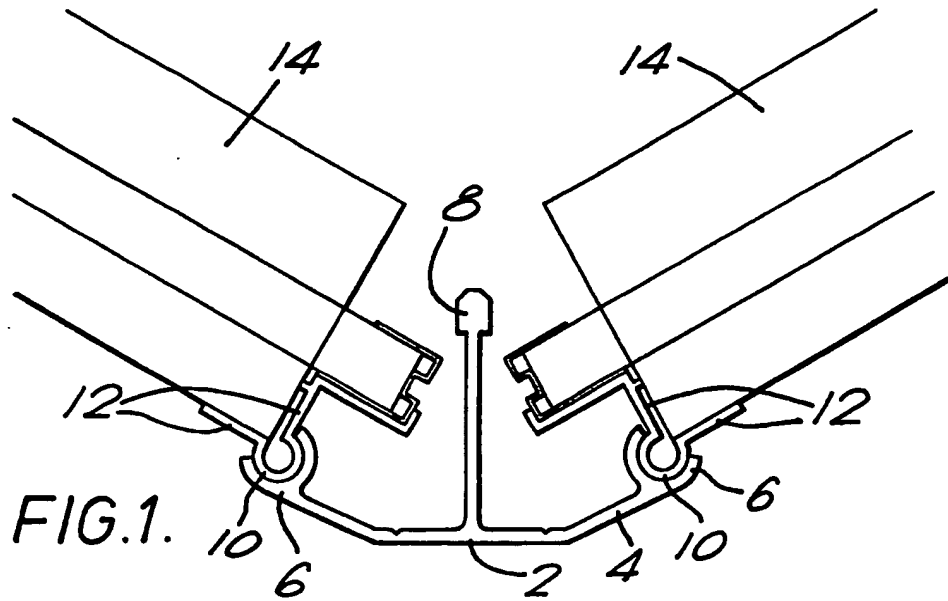


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

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This invention relates to a device for connecting planar members, particularly light admitting panels, or frames therefor, at relatively inclined positions.

A conservatory roof, for example, may be provided with a pitched roof portion in which a series of light admitting panels extend to and are connected at a roof ridge member at some required angle. Further, where two pitched roof portions intersect to form a roof valley, the panels on either side of the intersection are relatively inclined at some angle determined by the configuration of the roof structure.

Bay window construction requires a series of fixed frames, for mounting opening lights, to be provided at incrementally changing angular positions, the angles being determined, in each case, by the width and depth of the bay, and the number, and size, of the required lights.

It is an object of this invention to provide a device for facilitating the connection between relatively inclined planar members such as light admitting panels and frames therefor.

In one aspect this invention comprises a device suitable for connecting relatively inclined planar members, comprising an elongate member having spaced apart longitudinal side portions each being formed with pivot means, and a swivel member adapted to be attached to an edge portion of a planar member is provided for pivotal movement about the pivot means, whereby in use each planar member may be pivotally adjusted to a required position.

Advantageously, the pivot means is a channel formation of arcuate cross section formed along the length of each longitudinal side portion. Preferably, the swivel member has a formation complimentary in shape to, and pivotally cooperable with a channel formation of arcuate cross section formed along the length of each longitudinal side portion of the elongate member.

Where a device according to the invention is required to connect the edge portions of light admitting panels along a line of intersection of two pitched roof portions forming a roof valley, the elongate member may be in the form of a channel member, which in use may collect and drain water from the panels connected thereto.

The channel member, which is preferably an extruded plastics or aluminium section, may further be provided with a longitudinally extending reinforcing rib between the longitudinal side portions.

To facilitate attachment, each swivel member may be provided with flange portions adapted to be secured to the edge portion of a planar member.

Where a device according to the invention is required to connect the edge portions of planar members at a ridge line, in the case of roof construction, or at the vertices between glazing frames, in the case of a bay window arrangement, the elongate member is preferably in the form of a hollow bar, conveniently produced as an extrusion of plastics or aluminium. The pivot means provided along the opposed longitudinal side portions of the bar are preferably channel formations of arcuate cross section.

More preferably, the centers of curvature of the arcuate cross sections are disposed towards a base portion of the member, which connects the longitudinal side portions of the elongate member.

In order that the invention may be more clearly understood, two embodiments will now be described, by way of example only, with reference to the accompanying drawings in which:

Figure 1 is a cross section of a first embodiment of the device having panel members, shown only in part, pivotally connected thereto; and Figure 2 is a cross section of a second embodiment of the device, having panel members, shown only in part, connected thereto.

Referring to Figure 1, the device comprises an extruded elongate channel member 2, having inclined side wall portions 4, the edge portions of which have pivot means in the form of channels 6 of arcuate cross sectional form.

A reinforcing rib member 8 is provided to extend from the base of the channel member, 2, at an intermediate position between the side wall portions, 4. Each swivel member, 10, has a formation complimentary in shape to, and pivotally cooperable with the associated channel formation 6. Flange portions 12 of each swivel member 10 are adapted to engage, and be fixed to, the end portion of a light admitting panel 14.

In use, the end portions of the channel member 2 are fixed by means not shown, to support the channel member 2 along the line of a roof valley formed by the relatively inclined panels 14 and is arranged to collect and drain rain water from the surfaces of the panels 14.

Referring to Figure 2, the elongate member consists in a hollow extruded bar 16 having opposed longitudinal side portions provided with pivot means in the form of channels, 18, of arcuate cross section. The centers of curvature, C, of the arcuate cross sections are disposed towards the base portion 20, which connects together the longitudinal side portions of bar, 16. This arrangement enables the minimum included angle,  $\theta$ , between two adjacent panel members, 22, to be readily obtained, if required. Swivel members 24 have partly cylindrical surfaces adapted to pivotally cooperate in the channels 18. A longitudinal groove, 24a, is provided in the partly cylindrical surface of each swivel member 24, to accommodate heads of screw fasteners, not shown, provided to secure each swivel member to the edge of panel 22. The swivel members are also each provided with a tongue formation, 24b, adapted to be retained in a complimentary groove 26, provided along the edge of panel 22.

The device as described with reference to Figure 2 is particularly suitable for use as a ridge bar, or as a connecting member between adjacent fixed frames of a bow window structure.

In either case, a plastics or other cover strip, 28 may be provided to seal the assembly internally and externally.

What we claim is:-

1. A device suitable for connecting relatively inclined planar members comprising an elongate member having spaced apart longitudinal side portions each being formed with pivot means and a swivel member adapted to be attached to an edge position of a planar member is provided for pivotal movement about the pivot means, whereby in use each planar member may be pivotally adjusted to a required angular position.
2. A device as claimed in Claim 1 wherein the pivot means is channel formation of arcuate cross section formed along the length of each longitudinal side portion.
3. A device as claimed in Claim 2 wherein each swivel member has a formation complimentary in shape to and pivotally cooperable with a channel formation.
4. A device as claimed in any preceding Claim in which the elongate member is in the form of a channel member which, in use, collects and drains water from the surfaces of the planar members pivotally attached thereto.
5. A device as claimed in Claim 4 in which a longitudinally extending reinforcing rib member is provided along the channel shaped elongate member on an intermediate position between the longitudinal side portions.

6. A device as claimed in Claim 4 or 5 in which each swivel member has flange portions adapted to be secured to the edge portion of a planar member.
7. A device as claimed in Claim 1, 2 or 3 in which the elongate member is in the form of a hollow bar.
8. A device as claimed in Claim 7 in which the pivot means is a channel formation of arcuate cross section, and the center of curvature of each arcuate cross section is disposed towards the base portion of the hollow bar.
9. A device as claimed in Claim 7 or 8 in which each swivel member has a partly cylindrical surface adapted to pivotally cooperate with a channel formation.
10. A device substantially as described with reference to Figure 1 of the accompanying drawings.
11. A device substantially as described with reference to Figure 2 of the accompanying drawings.